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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,761

09/20/2004

Takashi Kato

2004-1139A

2919

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EXAMINER

WU, SHEAN CHIU

ART UNIT

PAPER NUMBER

1756

MAIL DATE

DELIVERY MODE

05/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,761	Applicant(s) KATO ET AL.	
	Examiner Shean C. Wu	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-7 have been canceled and Claims 8-15 are newly added.
2. Claims 9-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 9 and 10, the mesogen moiety is not clearly defined because the mesogen moiety comprises terminal R group(s), which only reads the present formula (A). If applicants intend to claim mesogenic moiety including at least one divalent group (i.e., having two ends for a mesogen moiety) they should clearly define the formulae.

In claim 11, the group at left side for formula (II) should be clearly defined, either (meth)acrylate or acrylate or both.

In claim 12, the claimed monomer does not have an antecedent basis because the formula (III) is not encompassed by any of formulae (A)-(E).

Claims 13-15 are rejected because they are dependent claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

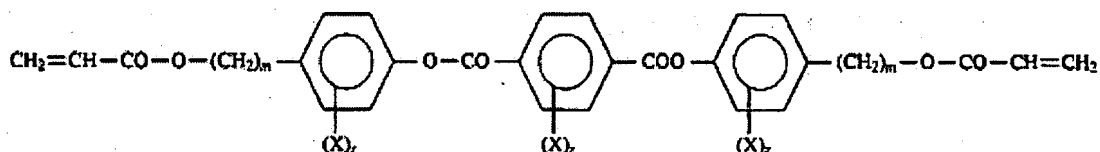
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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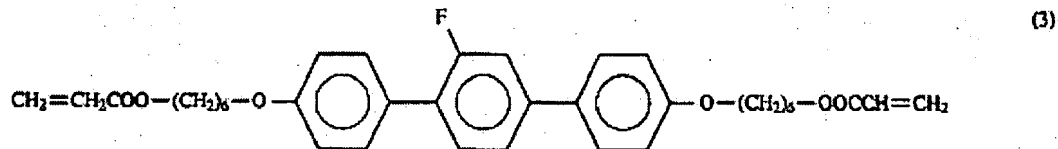
4. Claims 8 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Parri et al. (US 5,543,075).

The reference discloses a liquid crystalline material in the form of an anisotropic gel consisting of a polymerized monotropic or enantiotropic liquid crystalline material and a low-molecular weight liquid crystalline material. The liquid crystalline medium exhibits a dielectric anisotropy $\Delta\epsilon$ at most -0.5 and comprises at least two components where at least one component is a mesogenic compound comprising a structure element of formula (1), particular the formula IIAI



on columns 5 and 6. Also, see the polymerizable liquid crystals in the Examples and claim 7. The reference further teaches that the liquid crystalline material can be capillary filled between two substrates which are provided with electrode layers, and is then subsequently cured, for example, by irradiation with UV light (see col. 32, lines 55-67).

The reference compound (3) in Example 3 has structure below:



The spacer group of the reference $(\text{CH}_2)_6\text{O}$ can be represented by $(\text{CH}_2)_4-(\text{CH}_2-\text{CH}_2-\text{O})_{n=1}$, therefore the reference reads on the present formula (E).

The reference clearly anticipates the claimed invention.

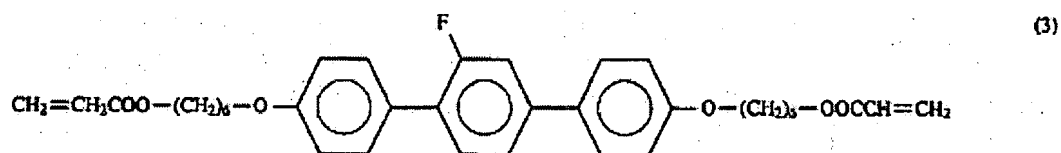
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5. Claims 8 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Coated et al. (US 5,723,066).

The reference discloses liquid crystalline materials having one or two polymerizable groups at terminal ends are used to form PDLC film. The PDLC film exhibits improved switching times, especially at low temperatures.

The reference further teaches that the precursor of the PDLC film comprising the precursor of the matrix, the liquid crystal mixture and one or more reactive liquid crystalline compounds can be capillary filled between two substrates which are provided with electrode layers, and the precursor of the PDLC film is subsequently cured, for example, by irradiation with UV light (col. 7, lines 1-13).

The reference compound (3) in Example 3 has structure below:



The spacer group of the reference $(\text{CH}_2)_6\text{O}$ can be represented by $(\text{CH}_2)_4-(\text{CH}_2-\text{CH}_2-\text{O})_{n=1}$, therefore the reference reads on the present formula (E). Also, see formulae (3.2)-(3.5).

The reference clearly anticipates the claimed invention.

Response to Arguments

6. Applicant's arguments, see Remarks, filed 3/1/07, with respect to the rejections of in the previous Office Action have been fully considered and are persuasive. Therefore, the rejections

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have been withdrawn. However, upon further consideration, new grounds of rejection are made in the sections 2 and 4-5 above.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

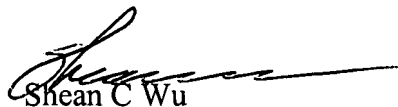
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shean C Wu
Primary Examiner
Art Unit 1756

SCW